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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,738	01/09/2001	William L. Bong	ARC 01.002	7735

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EXAMINER

KERNS, KEVIN P

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/757,738	Applicant(s) BONG, WILLIAM L.	
	Examiner Kevin P. Kerns	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: in the 6th line, one of the consecutive terms "strip" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burden (US 3,243,568) in view of Wada et al. (US 4,208,564), and further in view of Saito et al. (JP 3-297587).

Burden discloses an electric welding process and apparatus for electrosag welding, in which an insulated consumable guide tube is comprised of elongated strips 41 and 42 (with front and back faces) and has plural longitudinal channels to receive welding wires (column 1, lines 11-14 and 53-72; column 2, lines 1-72; column 3, lines 1-25 and 54-71; column 4, lines 1-29; and Figures 1-10). The guide tubes would selectively be bare or given an insulating coating of slag forming material, and are selected in a plurality of arrangements in terms of dimensions and geometries, which are illustrated in Figures 5 and 10, and would furthermore be selected as

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representatives of routine choices by one of ordinary skill in the art depending on welding conditions (column 4, lines 25-28; and Figures 5-10). The triangular shape limitation of claim 6 is considered to be representative of an arbitrary choice for the shape of the electrode guide cross section shown in Figure 9. Burden does not disclose the plural insulator modules, with at least one of the plural insulator modules configured to melt into a molten flux puddle.

However, Wada et al. disclose a nozzle structure of electrosag welding machines, in which nozzle plate 117 contains a plurality of insulator modules 120 (of varying numbers and heights, as shown in Figure 5), for the purpose of preventing a short circuit in the weld gap between the nozzle plate 117 and the surfaces of the planks to be welded (abstract; column 1, lines 9-13 and 53-68; column 2, lines 1-9; column 3, lines 39-52; and Figures 1-5).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the electric welding process and apparatus for electrosag welding, as disclosed by Burden, by adding the plurality of insulator modules, as taught by Wada et al., in order to prevent a short circuit in the weld gap between the nozzle plate 117 and the surfaces of the planks to be welded (Wada et al.; column 3, lines 39-50).

Neither Burden nor Wada et al. discloses that at least one of the plural insulator modules is configured to melt into a molten flux puddle.

However, Saito et al. disclose an assembly comprising a flux ring and consumable nozzle for preventing swing in electrosag welding, in which the assembly

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includes a consumable nozzle 24 positioned between base materials (10,12), and a flux ring (26,40) that includes an insulating spacer (46,54) with projections 58 (insulator module assembly) for centering of the consumable nozzle 24, with at least the flux ring (26,40) portion of the insulating spacer assembly being configured to melt into a molten flux puddle 33, for the purpose of preventing melting imbalance between the base materials (abstract; and Figures 1-15).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the electric welding process and apparatus for electroslog welding, as disclosed by Burden, by adding the plurality of insulator modules, as taught by Wada et al., in order to prevent a short circuit in the weld gap between the nozzle plate 117 and the surfaces of the planks to be welded, and by further using at least one of the plural insulator modules configured to melt into a molten flux puddle, as disclosed by Saito et al., in order to prevent melting imbalance between the base materials (Saito et al.; abstract).

Response to Arguments

4. The examiner acknowledges the applicant's amendment/response received by the USPTO on May 23, 2005. The applicant has overcome the prior specification and claim objections. However, a minor objection to claim 9 has been raised by the applicant's amendment. Claims 1-20 remain under consideration in the application.

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5. Applicant's arguments filed May 23, 2005 have been fully considered but they are not persuasive.

With regard to the applicant's remarks/arguments on pages 10-13 of the amendment, the examiner respectfully asserts that Burden only lacks the plural insulator modules, whereas Wada et al. disclose a plurality of insulator modules, both of which are operable in an electroslag welding environment, and Saito et al. further have at least one of the insulator modules configured to melt into a molten flux puddle (also within an electroslag welding environment). Regarding the argument in the paragraph bridging pages 11 and 12, the locations of the plurality of insulator modules are disclosed in Wada as "provided on opposite surfaces" (Wada et al.; column 3, lines 39-43; and Figure 5). In the two full paragraphs on page 12 of the remarks/arguments, the argument that addresses the "short circuit" and "accurate positioning" (differing motivations to combine), as set forth in Wada et al. and Saito et al., respectively, does not prevent a *prima facie* case of obviousness from being established, as each of the references are drawn to electroslag welding, while the two secondary references (Wada and Saito et al.) include respective motivations. Throughout pages 11 and 12 of the applicant's remarks/arguments, the applicant is generally attacking the references individually, while not fully considering what one of ordinary skill in the electroslag welding field would have known at the time of the applicant's teachings.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns
Primary Examiner
Art Unit 1725

Kevin Kerns 6/10/05

KPK

kpk

June 10, 2005